

The following Jacobs' comments on Phase III Remedial Action Plan – RTN 4-601, Former Aerovox Facility, New Bedford, MA, prepared by Brown and Caldwell, dated August 2016 are for consideration:

- 1) **Section 2.2, first bullet, page 2-2::** The bullet states that the existing sheet pile wall is the existing site boundary and the line formed by the elevation of MHW where the sheet pile wall is not present. Would this imply that portions of Aerovox west of the sheet pile might be considered as part of the Harbor?
- 2) **Section 2.4.1, 6<sup>th</sup> bullet, page 2-4:** The statement that PCB concentrations increase in groundwater toward the river implies a source either near or in the river itself. Is it implied that the source of PCBs in groundwater on the Aerovox site is in fact coming from the Harbor? If the statement implies that the source is located west of the sheet pile wall, then the source needs to be controlled to alleviate impact to the Harbor.
- 3) **Section 2.4.1, 10<sup>th</sup> bullet, page 2-5:** The bullet implies that contamination is contained in the shallow soils by means of a combined peat/sheet pile wall system. Is the peat layer continuous to the west and does it represent a true barrier across the site? If so, how did contamination reach depths below the peat layer in the northeastern portion of the site and what will be done to eliminate further contamination of the overburden? The bullet also implies that contamination in the deep overburden is due to migration due to tidal influences between the on-shore groundwater and the Harbor. Again, it implies that the Harbor is a source to contamination to the Aerovox site. Is this part of the conceptual site model for this document?
- 4) **Section 2.4.1, 11<sup>th</sup> and 12<sup>th</sup> bullet, page 2-6:** Much of the calibration of the flow model is based on earlier work performed during the early stages of investigation. Would it be possible to peer review the model by modeling specialists to assure the model calibration reflects actual flow conditions?-
- 5) **Section 2.4.1, 13<sup>th</sup> bullet, page 2-5:** DNAPL is noted in the northeast portion of the site associated with MW-15B/MW-15D and in the shallow soils that are contained vertically by peat and horizontally by the sheet pile wall. However, two locations north of the sheet pile wall, MIP-54 and MIP-53, have shallow PCB concentrations of 30,500 and 20,500 mg/kg, respectively. In the case of MIP-53, there is no peat noted in the boring log. Therefore, there are some of the highest concentrations in soil on the Aerovox site that is not bounded to the east by a sheet pile wall, and may not be bounded vertically by a peat layer. As discovered in the analysis of alternatives, these locations are not addressed as part of OU-3 and the preferred remedy (or any remedy) would leave this high level of contamination unaddressed. Why this area of the site ignored as a part of the overall remedy?
- 6) **Section 3.4, 1<sup>st</sup> bullet, page 3-4:** The bullet states that the primary remedial goal is to eliminate or reduce concentrations to the extent feasible or control access to areas with soils containing contaminants. Does this indicate that engineering controls will be in place to contain soils along the eastern boundary such that there would be no risk of disturbance that would result in mass transport of contaminated soils into the Harbor? Does this also mean that the Phase III considers the current sheet pile wall to be an effective barrier or should it be re-evaluated on its viability to serve as an engineering control while excavations are planned adjacent to it?
- 7) **Section 4.2.3, 1<sup>st</sup> paragraph, page 4-10:** Of the four OUs identified, not one of them specifically addresses NAPL except in a secondary manner. OU-1 addresses soil contamination at Titleist, OU-2 addresses indoor air, OU-3 addresses contamination in soil and groundwater, and OU-4 addresses contamination in bedrock. NAPL could be addressed as part of OU-3, but excavation and/or containment are the only alternatives evaluated. There is no alternative that addresses migration of NAPL off-site. Also, in the last sentence of this paragraph, they state that the remedial action for OU-3 can only be addressed if

the New Bedford Harbor source is controlled. Thus far, no evidence has been presented to indicate the Harbor is a source of contamination to the Aerovox site.

- 8) **Section 4.3.3.1, paragraph 3, page 4-10:** Three alternatives are identified: two with excavation; and containment and one with only containment. One excavation alternative outlines ex-situ treatment and one employs off-site disposal of contaminated soils. Containment consists of an engineered barrier over contaminated soils. There is no discussion of containment of soils to the east so they do not cross-contaminate water and sediments in the Harbor.
- 9) **Section 4.3.3.2, paragraph 1, page 4-12:** OU-3B identifies 4 alternatives to address contaminated groundwater above the bedrock surface. These include a total containment system, a total containment + hydraulic containment, total containment + in-situ treatment, and a funnel and gate system with a permeable reactive barrier across the eastern boundary of the site. The first three alternatives employ a low permeability barrier constructed around the entire area of contamination, similar to a coffer dam. The implementability of a total containment system is probably low because of the effort needed to maintain steady state in this type of system with pumping wells. The last alternative addresses this issue by inserting a permeable reactive barrier along the eastern boundary with low permeability barriers placed along the north and south boundaries. And, unlike the previous three alternatives, does not require a western boundary barrier. The feasibility of a barrier along the eastern side of the site between it and the Harbor was not investigated.
- 10) **Section 6.3.1, Paragraph 1, page 6-2:** Alternative OU3A-3 was selected as the preferred alternative because of its high ratings for implementability, risk, timeliness, non-pecuniary interests, and costs. The disadvantage of Alternative OU3A-3 is the contamination remains in place and is only contained by a cap. Soils on the eastern side of the site are vulnerable to sloughing into the harbor as the peat deteriorates and the sheet pile wall falls into disrepair. Not addressing containment on the eastern boundary is a fatal flaw in selecting this alternative.
- 11) **Section 6.3.2, Paragraph 1, page 6-2:** Alternative OU3B-4 addresses groundwater contamination by a vertical barrier wall, hot spot in-situ treatment, and permeable reactive barrier, and is the preferred alternative. This is a passive treatment technology that places a PRB on the eastern boundary of the site. There are two major problems with this preferred alternative: 1) can the barrier stand up to excavation that may begin in the harbor to address contaminated sediments there? and, 2) how does this system work in brackish water? It would seem that any work in the Harbor would likely compromise this barrier as it could not stand up to any excavation of Harbor along the eastern Aerovox boundary. Have there been investigations to how this PRB works in salt water? How is the effectiveness of the PRB going to be measured? Will monitoring locations (wells) be placed on the Harbor side to determine if the PRB is functioning properly? In addition, what provisions will there be for further actions if the PRB is not performing as designed and there is breakthrough to the east into the harbor?
- 12) **General:** It seems that a possible alternative that wasn't considered was a low permeability barrier along the eastern boundary with PRBs located on the northern and southern boundaries of the site. The costs and implementation would be similar, but it would also provide containment for the soils component and may also address the hydraulic control needed to maintain equilibrium. To ignore containment of soils along the eastern side of the site is to discount the impact of any effort to reduce contamination on the Harbor side of the boundary.
- 13) **General:** It seems that cost and implementability were weighted heavily in the evaluation of alternatives and were the prime determinants of the preferred alternatives. Capping and a passive system score better

for implementability and cost, but they don't address the problem that contamination will remain in place and the Aerovox site will continue to be a source of contamination for its surroundings for many years to come. Noting that some of the soils with the highest concentrations are located north of the current sheet pile wall and are not accounted for in the preferred alternatives means that eventual erosion of this soil into the harbor is inevitable.